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EXAMINER

CHEN, QING

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/685,407	<b>Applicant(s)</b> YOOK, HYUNGYOO	
	<b>Examiner</b> Qing Chen	<b>Art Unit</b> 2191	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-14,16-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-14,16-21 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

1. This Office action is in response to the amendment filed on January 14, 2009, entered by the RCE filed on the same date.
2. **Claims 1-4, 6-14, 16-21, and 23** are pending.
3. **Claims 1, 6, 7, 9, 16, 17, and 21** have been amended.
4. **Claims 5, 15, 22, and 24-30** have been canceled.
5. The objection to the title is withdrawn in view of Applicant's amendments to the title.
6. The objection to the specification is withdrawn in view of Applicant's amendments to the specification.

### ***Continued Examination Under 37 CFR 1.114***

7. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 14, 2009 has been entered.

### ***Response to Amendment***

#### ***Claim Objections***

8. **Claims 1-4, 6-8, 10, 16, and 18** are objected to because of the following informalities:

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- **Claims 1 and 4** recite the limitation “the controlled devices.” Applicant is advised to change this limitation to read “the plurality of controlled devices” for the purpose of providing it with proper explicit antecedent basis.
- **Claims 2, 3, and 6-8** depend on Claim 1 and, therefore, suffer the same deficiency as Claim 1.
- **Claims 2, 10, and 18** recite the limitation “the home network middleware.” Applicant is advised to change this limitation to read “the variety of home network middleware” for the purpose of providing it with proper explicit antecedent basis.
- **Claim 16** recites the limitation “the new application.” Applicant is advised to change this limitation to read “the new application file” for the purpose of providing it with proper explicit antecedent basis.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. **Claims 13, 14, 17-21, and 23** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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**Claim 13** recites the limitation “the application files.” There is insufficient antecedent basis for this limitation in the claim. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading “the application file” for the purpose of further examination.

**Claim 14** depends on Claim 13 and, therefore, suffers the same deficiency as Claim 13.

**Claim 17** recites the limitations “the applications” and “the application file.” There are insufficient antecedent bases for these limitations in the claim. In the interest of compact prosecution, the Examiner subsequently interprets these limitations as reading “applications” and “an application file,” respectively, for the purpose of further examination.

**Claims 18-21 and 23** depend on Claim 17 and, therefore, suffer the same deficiency as Claim 17.

**Claim 23** recites the limitation “the application.” There is insufficient antecedent basis for this limitation in the claim. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading “the applications” for the purpose of further examination.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 1, 2, 4, 6-10, 12-14, 16-18, 20, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **US 2002/0073244 (hereinafter “Davies”)** in view of **WO 02/09350 (hereinafter “Moonen”)**.

As per **Claim 1**, Davies discloses:

- a plurality of controlled devices (*see Paragraph [0021], “The system includes a HAVi network with a plurality of devices connected to the HAVi network via a IEEE 1394 bus. A number of internet protocol devices are communicating and operating with the HAVi network via an IP protocol.”*); and
- an application server performing the installation and management of applications for the plurality of controlled devices by using a framework capable of providing integrated support to a variety of home network middleware (*see Paragraph [0028], “The HAVi network 200 includes an IP and HAVi compliant device, i.e., an FAV, acting as a controller 210. The controller 210 runs a server 212 and includes HAVi software and APIs 214.”*; Paragraph [0035], “The HAVi stack 426 includes a device manager. As the FAV finds new devices coupled to the HAVi network 400, the device manager creates a device control module for each new device. These device control modules (DCMs) 424 are instantiated for all the devices on the HAVi network 400. The DCMs 424 allow the HAVi network 400 to interface with each HAVi

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*compliant device and IP device DCMs 422 allow the HAVi network 400 to interface with each IP device.”),*

- wherein the application server controls the plurality of controlled devices in response to the installed applications (*see Paragraph [0024], “The primary distinguishing feature of an FAV node is that it is able to take control responsibility for less sophisticated devices and does this by loading a control module, usually from the less sophisticated device, and executing it locally.”; Paragraph [0025], “In the embodiment shown in FIG. 1, FAV node 110 acts as a controller for the HAVi network 100 and connected devices.”; Paragraph [0030], “The IP DCM is a logical representation of the IP device 230 that provides an API used to send control commands to the IP device 230 by the server 212 on the controller 210.”).*

However, Davies does not disclose:

- wherein each of the plurality of controlled devices includes positional information on an application file to be installed, and the application file is stored in a file server on the Internet.

Moonen discloses:

- wherein each of the plurality of controlled devices includes positional information on an application file to be installed, and the application file is stored in a file server on the Internet (*see Page 8: 15-18, “An announcement contains a URL to which service actions are to be sent: the control server. In addition to that, CPs may query the UPnP network for particular device or services types or instances.” and 21 and 22, “After a CP has detected a service it wants to use (via SSDP), it controls the service by sending SCP actions to the control server URL or querying for state variables.”; Page 10: 3-6, “A next step 304 involves listening and reacting on the UPnP device announcement message. In step 306, the device description document of printer*

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*206 is retrieved from the URL embodied in the announcement message ...” and 8-10, “A step 308 involves a look-up component that maps a UPnP device description, in the form of a description document (in XML), to a HAVi DCM for that device, here printer 206.” and 19 and 20, “A step 310 involves running a downloaded Printer DCM 312 in the execution environment of bridge 118. This involves calling the DCM’s Install method.”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein each of the plurality of controlled devices includes positional information on an application file to be installed, and the application file is stored in a file server on the Internet. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the downloading of application files from a central server without requiring a user having to manually locate the application files.

As per **Claim 2**, the rejection of **Claim 1** is incorporated; and Davies further discloses:

- wherein the variety of home network middleware is selected from a group consisting of HAVi and HWW (*see Paragraph [0021], “The system includes a HAVi network with a plurality of devices connected to the HAVi network via a IEEE 1394 bus. A number of internet protocol devices are communicating and operating with the HAVi network via an IP protocol.”*).

As per **Claim 4**, the rejection of **Claim 1** is incorporated; and Davies further discloses:

- wherein each of the plurality of controlled devices includes a home network middleware module for communicating with the application server (*see Paragraph [0030], “The*



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*IP device 230 has IP and HAVi APIs 232 that provide API support to translate and relay calls between the server 212 and the IP device 230. The HAVi compliant devices 220 communicate with the server 210 by using HAVi APIs 222 and communicating via a communication medium such as the IEEE 1394 network.”).*

As per **Claim 6**, the rejection of **Claim 1** is incorporated; however, Davies does not disclose:

- wherein the application server extracts the positional information on the application file from the plurality of controlled devices and downloads the application file from the file server to install a relevant application in response to the extracted positional information.

Moonen discloses:

- wherein the application server extracts the positional information on the application file from the plurality of controlled devices and downloads the application file from the file server to install a relevant application in response to the extracted positional information (*see Page 10: 3-7, “A next step 304 involves listening and reacting on the UPnP device announcement message. In step 306, the device description document of printer 206 is retrieved from the URL embodied in the announcement message, and the document is sent to bridge server 222 using HTTP POST.”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein the application server extracts the positional information on the application file from the plurality of controlled devices and downloads the application file from the file server to install a

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relevant application in response to the extracted positional information. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the downloading of application files from a central server without requiring a user having to manually locate the application files.

As per **Claim 7**, the rejection of **Claim 1** is incorporated; and Davies further discloses:

- wherein the application server includes a home network middleware module for communicating with the plurality of controlled devices (*see Paragraph [0028], "The controller 210 runs a server 212 and includes HAVi software and APIs 214."*).

However, Davies does not disclose:

- wherein the application server includes a home network middleware module for extracting the positional information on the application file from the plurality of controlled devices, an application loader module for downloading the application file from the file server in accordance with the extracted positional information on the application file, and an application management module for controlling operations of the home network middleware module and the application loader module.

Moonen discloses:

- wherein the application server includes a home network middleware module for extracting the positional information on the application file from the plurality of controlled devices, an application loader module for downloading the application file from the file server in accordance with the extracted positional information on the application file, and an application management module for controlling operations of the home network middleware module and the

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application loader module (see Figure 1: 120, 122, and 128; Page 5: 26-28, “Bridge 118 comprises a software component 122, referred to as Installation Manager, that handles the installation of further software components needed to integrate B-device 116 into system 100.”; Page 10: 3-7, “A next step 304 involves listening and reacting on the UPnP device announcement message. In step 306, the device description document of printer 206 is retrieved from the URL embodied in the announcement message, and the document is sent to bridge server 222 using HTTP POST.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein the application server includes a home network middleware module for extracting the positional information on the application file from the plurality of controlled devices, an application loader module for downloading the application file from the file server in accordance with the extracted positional information on the application file, and an application management module for controlling operations of the home network middleware module and the application loader module. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the downloading of application files from a central server without requiring a user having to manually locate the application files.

As per **Claim 8**, the rejection of **Claim 7** is incorporated; however, Davies does not disclose:

- wherein the home network middleware module and the application loader module are bundled into the framework.

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Moonen discloses:

- wherein the home network middleware module and the application loader module are bundled into the framework (see Figure 1: 118, 120, and 122; Page 5: 24-28, "... bridge 118 detects B-device 116 as a new addition, either because bridge 118 scans B-cluster 110 or its registry/directory/look-up service (not shown) periodically or because B-cluster 110 actively notifies bridge 118. Bridge 118 comprises a software component 122, referred to as Installation Manager, that handles the installation of further software components needed to integrate B-device 116 into system 100." and 34 to Page 6: 1-4, "Similarly, Installation Manager 122 receives or retrieves information descriptive of newly added B-device 116. The descriptive information is possibly reformatted before being sent to a bridge server 124 via the Internet 126. In addition, bridge 118 preferably provides information about the local execution environment of home network 100. This information is relevant to the software components that server 124 downloads onto bridge 118."; Page 7: 4-8, "Next, assume that a matching translation module 128 has been found it is downloaded to the bridge, installed on platform 120 and registered in accordance with the protocol of standard A. This enables other applications and devices of A-cluster 102 to discover and use device 116 through module 128. The installation and registering of module 128 may be postponed until after it has been run on the execution environment of bridge 118.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein the home network middleware module and the application loader module are bundled into the framework. The modification would be obvious because one of ordinary skill in the art

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would be motivated to automate the downloading of application files from a central server framework.

As per **Claim 9**, Davies discloses:

- a framework capable of providing integrated support to a variety of home network middleware is loaded on the application server (*see Paragraph [0035], “The HAVi stack 426 includes a device manager. As the FAV finds new devices coupled to the HAVi network 400, the device manager creates a device control module for each new device. These device control modules (DCMs) 424 are instantiated for all the devices on the HAVi network 400. The DCMs 424 allow the HAVi network 400 to interface with each HAVi compliant device and IP device DCMs 422 allow the HAVi network 400 to interface with each IP device.”*); and
- one of the plurality of controlled devices controls the application server and performs installation and management of applications for the plurality of controlled devices (*see Paragraph [0028], “In FIG. 2, a block diagram of one embodiment of an IP device 230 integrated into a HAVi network 200 is shown. The HAVi network 200 includes an IP and HAVi compliant device, i.e., an FAV, acting as a controller 210. The controller 210 runs a server 212 and includes HAVi software and APIs 214.”*; Paragraph [0029], “In an alternative embodiment, an IP device may control the FAV or LAV device as well as other HAVi compliant devices coupled to a HAVi network.”; Paragraph [0035], “The HAVi stack 426 includes a device manager. As the FAV finds new devices coupled to the HAVi network 400, the device manager creates a device control module for each new device. These device control modules (DCMs) 424 are instantiated for all the devices on the HAVi network 400. The DCMs 424 allow the HAVi

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*network 400 to interface with each HAVi compliant device and IP device DCMs 422 allow the HAVi network 400 to interface with each IP device.”),*

- wherein the one of the plurality of controlled devices controls the plurality of controlled devices in response to the installed applications (*see Paragraph [0029], “In an alternative embodiment, an IP device may control the FAV or IAV device as well as other HAVi compliant devices coupled to a HAVi network.”; Paragraph [0030], “The IP DCM is a logical representation of the IP device 230 that provides an API used to send control commands to the IP device 230 by the server 212 on the controller 210.”),*

- wherein each of the plurality of controlled devices includes a home network middleware module for communicating with the application server (*see Paragraph [0030], “The IP device 230 has IP and HAVi APIs 232 that provide API support to translate and relay calls between the server 212 and the IP device 230. The HAVi compliant devices 220 communicate with the server 210 by using HAVi APIs 222 and communicating via a communication medium such as the IEEE 1394 network.”).*

However, Davies does not disclose:

- wherein each of the plurality of controlled devices includes an application management module for installing a new application or managing an already installed application by controlling the application server.

Moonen discloses:

- an application management module for installing a new application or managing an already installed application by controlling the application server (*see Figure 1: 120, 122, and 128; Page 5: 26-28, “Bridge 118 comprises a software component 122, referred to as*

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*Installation Manager, that handles the installation of further software components needed to integrate B-device 116 into system 100.”; Page 7: 4-8, “Next, assume that a matching translation module 128 has been found it is downloaded to the bridge, installed on platform 120 and registered in accordance with the protocol of standard A. This enables other applications and devices of A-cluster 102 to discover and use device 116 through module 128. The installation and registering of module 128 may be postponed until after it has been run on the execution environment of bridge 118.”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein each of the plurality of controlled devices includes an application management module for installing a new application or managing an already installed application by controlling the application server. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the installations of application files downloaded from a central server without requiring a user having to manually perform the installations.

As per **Claim 10**, the rejection of **Claim 9** is incorporated; and Davies further discloses:

- wherein the variety of home network middleware is selected from a group consisting of HAVi and HWW (see Paragraph [0021], “The system includes a HAVi network with a plurality of devices connected to the HAVi network via a IEEE 1394 bus. A number of internet protocol devices are communicating and operating with the HAVi network via an IP protocol.”).

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As per **Claim 12**, the rejection of **Claim 9** is incorporated; however, Davies does not disclose:

- wherein an application file is stored in a file server on the Internet.

Moonen discloses:

- wherein an application file is stored in a file server on the Internet (*see Page 2: 30-33, "... the inventors propose a solution wherein a bridge is connected to a server, e.g., on the Internet. This server offers a lookup service for some set of standards, and allows a bridge to locate and download the appropriate translation modules for use in the home network."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein an application file is stored in a file server on the Internet. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the downloading of application files from a central server without requiring a user having to manually locate the application files.

As per **Claim 13**, the rejection of **Claim 12** is incorporated; and Davies further discloses:

- wherein the application server includes a home network middleware module for communicating with the plurality of controlled devices (*see Paragraph [0028], "The controller 210 runs a server 212 and includes HAVi software and APIs 214."*).

However, Davies does not disclose:

- wherein the application server includes an application loader module for downloading the application file from the file server under the control of the one of the plurality of controlled



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devices, and an application platform service module for controlling operations of the home network middleware module and the application loader module under the control of the one of the plurality of controlled devices.

Moonen discloses:

- an application loader module for downloading the application file from the file server, and an application platform service module for controlling operations of the home network middleware module and the application loader module (*see Figure 1: 120, 122, and 128; Page 5: 26-28, "Bridge 118 comprises a software component 122, referred to as Installation Manager, that handles the installation of further software components needed to integrate B-device 116 into system 100."; Page 10: 3-7, "A next step 304 involves listening and reacting on the UPnP device announcement message. In step 306, the device description document of printer 206 is retrieved from the URL embodied in the announcement message, and the document is sent to bridge server 222 using HTTP POST."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein the application server includes an application loader module for downloading the application file from the file server under the control of the one of the plurality of controlled devices, and an application platform service module for controlling operations of the home network middleware module and the application loader module under the control of the one of the plurality of controlled devices. The modification would be obvious because one of ordinary skill in the art would be motivated to utilize a main controlling device to automate the

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downloading of application files from a central server without requiring a user having to manually locate the application files.

As per **Claim 14**, the rejection of **Claim 13** is incorporated; however, Davies does not disclose:

- wherein the home network middleware module and the application loader module of the application server are bundled into the framework.

Moonen discloses:

- wherein the home network middleware module and the application loader module of the application server are bundled into the framework (*see Figure 1: 118, 120, and 122; Page 5: 24-28, "... bridge 118 detects B-device 116 as a new addition, either because bridge 118 scans B-cluster 110 or its registry/directory/look-up service (not shown) periodically or because B-cluster 110 actively notifies bridge 118. Bridge 118 comprises a software component 122, referred to as Installation Manager, that handles the installation of further software components needed to integrate B-device 116 into system 100."* and 34 to Page 6: 1-4, "Similarly, Installation Manager 122 receives or retrieves information descriptive of newly added B-device 116. The descriptive information is possibly reformatted before being sent to a bridge server 124 via the Internet 126. In addition, bridge 118 preferably provides information about the local execution environment of home network 100. This information is relevant to the software components that server 124 downloads onto bridge 118."; Page 7: 4-8, "Next, assume that a matching translation module 128 has been found it is downloaded to the bridge, installed on platform 120 and registered in accordance with the protocol of standard A. This enables other

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*applications and devices of A-cluster 102 to discover and use device 116 through module 128. The installation and registering of module 128 may be postponed until after it has been run on the execution environment of bridge 118.”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein the home network middleware module and the application loader module of the application server are bundled into the framework. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the downloading of application files from a central server framework.

As per **Claim 16**, the rejection of **Claim 9** is incorporated; however, Davies does not disclose:

- wherein the application management module determines a location where a new application file is downloaded and then requests the application server to install the new application file.

Moonen discloses:

- wherein the application management module determines a location where a new application file is downloaded and then requests the application server to install the new application file (*see Page 7: 4-8, “Next, assume that a matching translation module 128 has been found it is downloaded to the bridge, installed on platform 120 and registered in accordance with the protocol of standard A. This enables other applications and devices of A-cluster 102 to discover and use device 116 through module 128. The installation and registering*

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*of module 128 may be postponed until after it has been run on the execution environment of bridge 118.”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein the application management module determines a location where a new application file is downloaded and then requests the application server to install the new application file. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the downloading and installations of application files from a central server without requiring a user having to manually locate the application files and perform the installations.

As per **Claim 17**, Davies discloses:

- (1) detecting connection of the plurality of controlled devices with a home network by an application server loaded with a framework capable of providing integrated support to a variety of home network middleware (*see Paragraph [0025], “In the embodiment shown in FIG. 1, FAV node 110 acts as a controller for the HAVi network 100 and connected devices. Connected to the HAVi network 100 are several devices including a video camera 120, a television 130, a VCR 140, and a CD player 150. These devices are connected via a bus 124. Generally, the bus 124 used to connect devices to the HAVi network 100 is the IEEE 1394 bus standard. An IP device 160 is also integrated into the HAVi network 100 via an IP protocol 164.”*); and

- (2) installing applications and controlling the plurality of controlled devices in response to the installed applications by the application server (*see Paragraph [0024], “The*

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*primary distinguishing feature of an FAV node is that it is able to take control responsibility for less sophisticated devices and does this by loading a control module, usually from the less sophisticated device, and executing it locally.”; Paragraph [0025], “In the embodiment shown in FIG. 1, FAV node 110 acts as a controller for the HAVi network 100 and connected devices.”; Paragraph [0030], “The IP DCM is a logical representation of the IP device 230 that provides an API used to send control commands to the IP device 230 by the server 212 on the controller 210.”; Paragraph [0035], “The HAVi stack 426 includes a device manager. As the FAV finds new devices coupled to the HAVi network 400, the device manager creates a device control module for each new device. These device control modules (DCMs) 424 are instantiated for all the devices on the HAVi network 400. The DCMs 424 allow the HAVi network 400 to interface with each HAVi compliant device and IP device DCMs 422 allow the HAVi network 400 to interface with each IP device.”).*

However, Davies does not disclose:

- wherein each of the plurality of controlled devices includes positional information on an application file, and the application file is stored in a file server on the Internet.

Moonen discloses:

- wherein each of the plurality of controlled devices includes positional information on an application file, and the application file is stored in a file server on the Internet (*see Page 8: 15-18, “An announcement contains a URL to which service actions are to be sent: the control server. In addition to that, CPs may query the UPnP network for particular device or services types or instances.” and 21 and 22, “After a CP has detected a service it wants to use (via SSDP), it controls the service by sending SCP actions to the control server URL or querying for*

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*state variables.”; Page 10: 3-6, “A next step 304 involves listening and reacting on the UPnP device announcement message. In step 306, the device description document of printer 206 is retrieved from the URL embodied in the announcement message ...” and 8-10, “A step 308 involves a look-up component that maps a UPnP device description, in the form of a description document (in XML), to a HAVi DCM for that device, here printer 206.” and 19 and 20, “A step 310 involves running a downloaded Printer DCM 312 in the execution environment of bridge 118. This involves calling the DCM’s Install method.”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include wherein each of the plurality of controlled devices includes positional information on an application file, and the application file is stored in a file server on the Internet. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the downloading of application files from a central server without requiring a user having to manually locate the application files.

As per **Claim 18**, the rejection of **Claim 17** is incorporated; and Davies further discloses:

- wherein the variety of home network middleware is selected from a group consisting of HAVi and HWW (*see Paragraph [0021], “The system includes a HAVi network with a plurality of devices connected to the HAVi network via a IEEE 1394 bus. A number of internet protocol devices are communicating and operating with the HAVi network via an IP protocol.”*).

As per **Claim 20**, the rejection of **Claim 17** is incorporated; and Davies further discloses:

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- wherein the framework provides Internet access services and home network middleware services (*see Paragraph [0028], "In one embodiment, the proxies 234 and APIs 232 are downloaded onto the IP device 230 from the Internet."; Paragraph [0030], "The IP device 230 has IP and HAVi APIs 232 that provide API support to translate and relay calls between the server 212 and the IP device 230. The HAVi compliant devices 220 communicate with the server 210 by using HAVi APIs 222 and communicating via a communication medium such as the IEEE 1394 network."*).

As per **Claim 21**, the rejection of **Claim 17** is incorporated; however, Davies does not disclose:

- extracting the positional information on an application file necessary for controlling the plurality of controlled devices, by the application server;
- downloading the application file from the file server in accordance with the extracted positional information by the application server; and
- executing the downloaded application file and installing a relevant application by the application server.

Moonen discloses:

- extracting the positional information on an application file necessary for controlling the plurality of controlled devices, by the application server (*see Page 10: 3-6, "A next step 304 involves listening and reacting on the UPnP device announcement message. In step 306, the device description document of printer 206 is retrieved from the URL embodied in the announcement message ..."*);

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- downloading the application file from the file server in accordance with the extracted positional information by the application server (*see Page 10: 3-6, "A next step 304 involves listening and reacting on the UPnP device announcement message. In step 306, the device description document of printer 206 is retrieved from the URL embodied in the announcement message ..."*); and

- executing the downloaded application file and installing a relevant application by the application server (*see Page 10: 8-10, "A step 308 involves a look-up component that maps a UPnP device description, in the form of a description document (in XML), to a HAVi DCM for that device, here printer 206." and 19 and 20, "A step 310 involves running a downloaded Printer DCM 312 in the execution environment of bridge 118. This involves calling the DCM's Install method."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moonen into the teaching of Davies to include extracting the positional information on an application file necessary for controlling the plurality of controlled devices, by the application server; downloading the application file from the file server in accordance with the extracted positional information by the application server; and executing the downloaded application file and installing a relevant application by the application server. The modification would be obvious because one of ordinary skill in the art would be motivated to automate the downloading of application files from a central server without requiring a user having to manually locate the application files.



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13. **Claims 3, 11, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Davies** in view of **Moonen** as applied to Claims 1, 9, and 17 above, and further in view of US **7,058,719 (hereinafter “Motoyama”)**.

As per **Claim 3**, the rejection of **Claim 1** is incorporated; however, Davies and Moonen do not disclose:

- wherein the framework is an OSGi framework.

Motoyama discloses:

- wherein the framework is an OSGi framework (*see Column 1: 31-37, “With such a large number of sophisticated electronic devices in our home and workplace, there has been recognized a need to manage such equipment. For example, the Open Services Gateway Initiative (OSGI) is an industry initiative to provide the technology to allow management of localized electronics equipment by use of an external service provider.”*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Motoyama into the teaching of Davies to include wherein the framework is an OSGi framework. The modification would be obvious because one of ordinary skill in the art would be motivated to allow management of localized electronics equipment by use of an external service provider (*see Motoyama – Column 1: 31-37*).

As per **Claim 11**, the rejection of **Claim 9** is incorporated; however, Davies and Moonen do not disclose:

- wherein the framework is an OSGi framework.

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Motoyama discloses:

- wherein the framework is an OSGi framework (*see Column 1: 31-37, “With such a large number of sophisticated electronic devices in our home and workplace, there has been recognized a need to manage such equipment. For example, the Open Services Gateway Initiative (OSGI) is an industry initiative to provide the technology to allow management of localized electronics equipment by use of an external service provider.”*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Motoyama into the teaching of Davies to include wherein the framework is an OSGi framework. The modification would be obvious because one of ordinary skill in the art would be motivated to allow management of localized electronics equipment by use of an external service provider (*see Motoyama – Column 1: 31-37*).

As per **Claim 19**, the rejection of **Claim 17** is incorporated; however, Davies and Moonen do not disclose:

- wherein the framework is an OSGi framework.

Motoyama discloses:

- wherein the framework is an OSGi framework (*see Column 1: 31-37, “With such a large number of sophisticated electronic devices in our home and workplace, there has been recognized a need to manage such equipment. For example, the Open Services Gateway Initiative (OSGI) is an industry initiative to provide the technology to allow management of localized electronics equipment by use of an external service provider.”*).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Motoyama into the teaching of Davies to include wherein the framework is an OSGi framework. The modification would be obvious because one of ordinary skill in the art would be motivated to allow management of localized electronics equipment by use of an external service provider (*see Motoyama – Column 1: 31-37*).

14. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Davies** in view of **Moonen** as applied to Claim 17 above, and further in view of “**UNIX Programmer’s Manual**,” November 1971 (hereinafter “**UNIX1971**”).

As per **Claim 23**, the rejection of **Claim 17** is incorporated; and Davies further discloses:

- an application management step of executing the applications installed in the application server (*see Paragraph [0035], “The HAVi stack 426 includes a device manager. As the FAV finds new devices coupled to the HAVi network 400, the device manager creates a device control module for each new device. These device control modules (DCMs) 424 are instantiated for all the devices on the HAVi network 400. The DCMs 424 allow the HAVi network 400 to interface with each HAVi compliant device and IP device DCMs 422 allow the HAVi network 400 to interface with each IP device.”*).

Moonen further discloses:

- an application management step of updating the applications installed in the application server (*see Page 4: 16-18, “When the new translation modules become available on*

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*the server, bridges that have sent requests for translation modules in the past with which the server could not comply, can now be notified of an upgrade.”).*

However, Davies and Moonen do not disclose:

- an application management step of stopping and deleting the applications installed in the application server.

UNIX1971 discloses:

- an application management step of stopping and deleting the applications installed in the application server (*see commands: exit and rm*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of UNIX1971 into the teaching of Davies to include an application management step of stopping and deleting the applications installed in the application server. The modification would be obvious because one of ordinary skill in the art would be motivated to provide full application support for proper maintenance and maximum extensibility.

### ***Response to Arguments***

15. Applicant’s arguments filed on January 14, 2009 have been fully considered, but they are not persuasive.

### ***In the Remarks, Applicant argues:***

- a) In the rejection, the Examiner concedes that Davies fails to disclose this feature and applies Moonen to compensate for Davies' deficiencies. However, Applicant submits Moonen

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fails to disclose wherein each of "the controlled devices includes positional information on an application file to be installed," as recited in claim 1.

The Examiner cites to FIGS 1 and 3; page 2, lines 30-33; page 9, lines 26-27; and page 10, lines 5-6. However, these portions are silent with regard to this feature. Specifically, these portions are summarized by the portion of page 2 relied on and which states:

[T]he inventors propose a solution wherein a bridge is connected to a server, e.g., on the Internet. This sever offers a lookup service for some set of standards, and allows a bridge to locate and download the appropriate translations modules for use in the home network.

Accordingly, it is the server having a lookup service which allows the bridge to locate and download the appropriate translation modules. This does not imply or fairly suggest that the positional information is located on a controlled device. Rather, this information is located external to a controlled device. Moreover, the cited portions of pages 9 and 10 are consistent with this disclosure.

***Examiner's response:***

a) Examiner disagrees. With respect to the Applicant's assertion that Moonen fails to disclose wherein each of "the controlled devices includes positional information on an application file to be installed," the Examiner respectfully submits that Moonen clearly discloses "wherein each of the controlled devices includes positional information on an application file to be installed" (see Page 8: 15-18, "An announcement contains a URL to which service actions are to be sent: the control server. In addition to that, CPs may query the UPnP network for particular device or services types or instances." and 21 and 22, "After a CP has detected a

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*service it wants to use (via SSDP), it controls the service by sending SCP actions to the control server URL or querying for state variables.”; Page 10: 3-6, “A next step 304 involves listening and reacting on the UPnP device announcement message. In step 306, the device description document of printer 206 is retrieved from the URL embodied in the announcement message ...” and 8-10, “A step 308 involves a look-up component that maps a UPnP device description, in the form of a description document (in XML), to a HAVi DCM for that device, here printer 206.” and 19 and 20, “A step 310 involves running a downloaded Printer DCM 312 in the execution environment of bridge 118. This involves calling the DCM’s Install method.”). Note that the device description document of a printer is retrieved from the URL embodied in the announcement message. The device description document of the printer is then mapped to a HAVi DCM for the printer. In other words, the printer’s announcement message includes a URL (positional information) for retrieving its device description document to be mapped (application file to be installed).*

Therefore, for at least the reason set forth above, the rejections made under 35 U.S.C. § 103(a) with respect to Claims 1 and 17 are proper and therefore, maintained.

***In the Remarks, Applicant argues:***

b) Further, Applicant notes that Moonen discloses the steps to bridge a HAVi device, such as a digital camera, to a UPnP. (See page 8, line 30 through page 9, line 30; FIG. 2). The relevant portion of the process related to information exchanged from the digital camera is as follows:

(1) In step 212, camera 214 is physically plugged into the HAVi’s 1394 network, making the camera 214 an active node; and

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(2) In step 220 the registration attributes of the DCM of camera 214 and its FCM components are retrieved from the HAVi Registry on platform 218.

As such, Moonen expressly discloses that once the camera is plugged in, the DCM and FCM components are retrieved using bridge 118. Nowhere throughout the rest of the process does Moonen disclose the positional information for an application is located in the camera 214.

***Examiner's response:***

b) Examiner disagrees. With respect to the Applicant's assertion that nowhere throughout the rest of the process does Moonen disclose the positional information for an application is located in the camera, the Examiner respectfully submits that the Applicant's argument is, at best, moot in view of the Examiner's further clarification of Moonen in the Examiner's response (a) hereinabove.

Therefore, for at least the reason set forth above, the rejections made under 35 U.S.C. § 103(a) with respect to Claims 1 and 17 are proper and therefore, maintained.

***In the Remarks, Applicant argues:***

c) In the rejection, the Examiner concedes that Davies discloses an application management module for installing a new application or managing an already installed application by controlling the application server. (Office Action, p. 22). To compensate for this deficiency, the Examiner relies on the software component 122 or the translation module 128 of Moonen. However, both the software component 122 and the translation module 128 are located within the bridge 118, not in each of the controlled devices. (See FIG. 1). Accordingly, there is no

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support that Moonen discloses that an application management module is located on any controlled device, or for that matter, included in each of a plurality of controlled devices.

***Examiner's response:***

c) Examiner disagrees. Applicant's arguments are not persuasive for at least the following reasons:

First, without acquiescing to the Applicant's assertion that there is no support that Moonen discloses that an application management module is located on any controlled device, or for that matter, included in each of a plurality of controlled devices, as previously pointed out in the Non-Final Rejection (mailed on 04/01/2008) and the Final Rejection (mailed on 10/14/2008) and further clarified hereinafter, the Examiner would like to point out that Moonen is relied upon for its specific teaching of "an application management module for installing a new application or managing an already installed application by controlling the application server." Davies clearly discloses "wherein each of the plurality of controlled devices includes a home network middleware module for communicating with the application server," but does not disclose "wherein each of the plurality of controlled devices includes an application management module for installing a new application or managing an already installed application by controlling the application server." Applicant's argument regarding there is no support that Moonen discloses that an application management module is located on any controlled device, or for that matter, included in each of a plurality of controlled devices is, at best, moot because Davies already discloses a controlled device containing various software modules (*i.e.*, APIs). Thus, in view of the teaching of Moonen and the state of the art, one of ordinary skill in the art would be



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motivated to incorporate the application management module of Moonen into a controlled device of Davies in order to install applications files downloaded from a central server.

Second, Examiner respectfully submits that Moonen clearly discloses “an application management module for installing a new application or managing an already installed application by controlling the application server” (*see Figure 1: 120, 122, and 128; Page 5: 26-28, “Bridge 118 comprises a software component 122, referred to as Installation Manager, that handles the installation of further software components needed to integrate B-device 116 into system 100.”; Page 7: 4-8, “Next, assume that a matching translation module 128 has been found it is downloaded to the bridge, installed on platform 120 and registered in accordance with the protocol of standard A. This enables other applications and devices of A-cluster 102 to discover and use device 116 through module 128. The installation and registering of module 128 may be postponed until after it has been run on the execution environment of bridge 118.”*). Note that the Installation Manager of the bridge handles the installation of further software components needed to integrate a new device into the network system.

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. § 103(a) with respect to Claim 9 is proper and therefore, maintained.

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191